DOCUMENT RESUME

ED 164 049 JC 790 056

AUTHOR Poris, Marilyn; Eskow, Seymour
TITLE The Impact of Rockland Community College on the Economy of Rockland County.
INSTITUTION Rockland Community Coll., Suffern, N.Y.
PUB DATE Sep 78
NOTE 49p.

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS College Faculty; *Community Benefits; Community Colleges; *Educational Economics; Educational Finance; Expenditure Per Student; *Expenditures; *Junior Colleges; Mathematical Models; Productivity
IDENTIFIERS *Economic Impact Studies

ABSTRACT

A study to determine the economic impact of Rockland Community College on Rockland County used models based on four spending sources, the college as a corporation, the faculty and staff as private individuals, the students as private individuals, and visitors. Questionnaires were used to assess faculty and student monthly expenditures and amounts maintained in local banks. Other data considered were: expenditures to county vendors, compensation to faculty and students, payments from other than college operating funds, payments to government agencies, and bank balances for the student tuition account. The study revealed that the county contributed $2,637,000 to the college and the college then brought state money ($5,027,848), federal money ($1,062,194), and student tuition ($4,703,527) back into county circulation. Taking into account the multiplier effect of reinvested money, for each dollar the county contributed, ten dollars were returned to the local economy through direct college expenditures and purchases of individuals associated with the college. The total local economic impact generated by the college fell within 24 to 29.5 million dollars annually. Projections are included in the report for changes in enrollments (increases or decreases), for chargebacks caused by students going elsewhere, and for changes occurring if there were no college in Rockland County. (MB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED164049

THE IMPACT OF ROCKLAND COMMUNITY COLLEGE ON THE ECONOMY OF ROCKLAND COUNTY

Dr. Marilyn Poris
Director
Institutional Research

Dr. Seymour Eskow
President

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

S.U.N.Y.

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

JC 790 056

Rockland Community College
145 College Road
Suffern, New York 10901

September, 1978

FORWARD

When Herbert Isaacs and I built the models and guidelines which were published by the American Council on Education in 1971, our root concern was to promote the idea of conducting such studies and to illustrate some reasonable approaches. We had no theoretical studies to imitate, and our sources were, therefore, (a) existing particular studies, (b) general economic models, (c) the ideas and opinions of college administrators and local businessmen, and (d) common sense. We warned against slavish imitation of the models, because we had used an armchair as a laboratory; many colleges and universities have started with (note I do not say 'used') the models and have sent me copies of the resulting report. No two have been done the same way.

The accompanying report, the work of Marilyn Poris and the colleagues she mentions in her acknowledgments, seems to me to have been carefully developed, and the Caffrey-Isaacs models have been adapted or ignored when they did not exactly serve in the original form. I am struck by the fact that whenever choices were possible, the 'conservative' estimate has been used: That is, in doubt one should use the lower estimate of value and the higher estimate of cost.

I have often acted as a consultant to colleges and universities using this approach, if only in evaluating their report. People are sometimes surprised to find that I am not deeply concerned by the exact figures which result--how many millions of dollars plus or minus. The

rule-of-thumb estimate of impact as at least 150% and perhaps as much as 300% of the total operating budget is, for some purposes, good enough. Nevertheless, the taxpayer is properly skeptical of the claims of the value of government agencies, and thus it is a good idea to have enough facts to support the estimate.

What has always seemed important to me is to recognize that the impact exists and that it is very large--clearly returning to the community many times the cost. In the case of a New York community college, in which the local sponsor usually pays a share smaller than that paid by students (tuition) or the State University (roughly 40%), the taxpayer is getting a great bargain. To me the most important single consideration is that if a Rockland County resident is determined to attend a community college, and if there were no community college in the county, and if Rocklanders went to another New York community college, the county would have to pay a much higher rate per student in the form of chargebacks. If there were no local college, it is probably safe to say, some students would not go away to college, but most would. Such students would in many cases not be able to live at home, would have commuting expenses, and would pay as high or higher tuition.

To simplify the model assume that a certain county's taxpayers contribute $600 per student as a direct contribution by the county to the college budget. (This does not count what the individual student pays as tuition.) It may be argued that if there were not college the local taxpayer would 'save' $600 per year times (say) 4300 students,

or about $2,580,000. However, let us assume that about 80% of those students would go to college anyway and would go elsewhere. Under New York state law, the county must reimburse the other colleges for each student, at a legally established rate. Since most community colleges in New York have a higher 'chargeback rate' than Rockland, the taxpayers would still pay almost $2 million a year, plus the expense of maintaining students away from home, plus the loss of the economic values demonstrated in the Poris report.

However, one may quibble about pieces and bits of the models or about whether a given factor is worth $1 million or only $800,000, the inescapable conclusion from such studies is that a sizeable college like Rockland has a very sizeable impact on the local economy. The realization that there is any such impact often surprises people, and the scope of it is only a further surprise. Whatever the Poris report says about any factor, my experience leads me to believe that the effect is probably as great as stated but more probably even greater.

If Rockland Community College were a private institution in a small town with no other principal attraction, the existence of the college would be a major factor. If this were a 'college town' and the college disappeared, the economic effect would be catastrophic and obvious. Many cases exist to confirm this. When Vassar thought some years ago about moving to Connecticut, the Poughkeepsie community in great alarm did everything possible to prevent it. Conversely, in Manhattan or Brooklyn a college is such a tiny economic factor, or has effects so difficult to trace, that its direct cash-flow

value may be difficult to assess. In a suburban community like Rockland, both conditions may be found--the college payroll and the college gas, electric, telephone, and supplies bills are measured in hundreds of thousands of dollars--and the payroll in millions. It may be argued that few if any Rockland County businesses would have to shut down if the college were to disappear. But there is plenty of evidence in the Poris report that many would suffer from a little to a lot.

Finally, I always caution readers of a report like the attached that the real story can never be told with any precision. Who is to judge the ultimate economic effects? We know from refined economic studies of a broad scope that the lifetime income of a person is increased markedly by every year of college, although opinions differ about what might happen if the same money spent on education were to be otherwise invested. How can we assess the economic value of enabling people to find a satisfying life work or career? Or of discovering greater pleasure in life through literature, art, music, or science? If existence were measured only in economic terms, or if we were concerned only with literal dollars spent and received back, a college is still an impressive economic factor. But when we consider the richness which is added to life from discovery, appreciation, self-knowledge, awareness of the great variety of human activity and achievement, and other by-products of education, the values are beyond price.

Hence in one sense I always apologize for making a mere economic analysis of a college's impact on a community. It is the least of its values, but there is no question that the value is there, even if one counts only

the cash which flows to and fro in the community. The attached report is workmanlike and sound. One of its implications is that we should concede the great and mere cash value and push that aside in favor of the more important, priceless values of a college which makes the community truly richer by its presence.

John Caffrey

TABLE OF CONTENTS

Section	Page
FORWARD	ii
LIST OF TABLES	ix
LIST OF FIGURES	x
ACKNOWLEDGEMENTS	xi
CHAPTER I INTRODUCTION	1
Purpose	1
Background	2
Rockland County	3
CHAPTER II THE MODELS	5
Sources of Expenditure	5
Explanation of Models	8
CHAPTER III METHOD	13
Instrument and Sampling	13
Additional Data Collection	14
CHAPTER IV Analysis of Results	16
Explanation of Conservative Approach	16
Results as per Models	18
B - 1.1.1 Expenditure by College	18
B - 1.2.1 Expenditure by Faculty and Staff for Local Rental Housing	19

Section Page

B - 1.1.2.2 Local Non-Housing Expenditures by Local Faculty and Staff..... 20

B - 1.1.2.3 Local Expenditures by Non-Local F & S..... 20

B - 1.1.3.1 Local Expenditures by Students (Non-Housing)... 21

B - 1.1.3.2 Student Expenditures for Local Rental Housing.. 21

B - 1.1.3.3 Non-Housing Student Expenditures By Those Who Rent..... 22

B - 1.1.3.4 Local Expenditures by Non-Local Students..... 22

Local Expenditures by Student Government..... 22

B - 1.1.4 Local Expenditures by Visitors..... 23

Local Expenditures from Grant Money..... 23

Total Economic Impact..... 24

Interest Accrued by County..... 25

Expansion of Banking Credit Base..... 26

CHAPTER V CONCLUSIONS AND IMPLICATIONS..... 27

Conclusions..... 27

Implications

Rule of Thumb Estimate..... 27

Enrollment Change..... 28

Students Going Elsewhere..... 29

No-College Existence..... 30

Summary of Results..... 33

SOURCES..... 34

APPENDIX A..... 35

APPENDIX B..... 36

APPENDIX C..... 37

LIST OF TABLES

Table		Page
1	Economic Impacts on Local Business.....	24
2	Interest Accrued by Rockland County.....	25
3	Enrollment Decline of 500.....	28
4	Economic Impact of Chargebacks.....	29
5	Enrollment Increase of 500.....	30
6	Economic Impact Change With No-College.....	32

LIST OF FIGURES

Figure		Page
1	Map of Rockland County.....	4
2	Reinvestment of Moneys.....	6
3	Expenditure Model.....	7

ACKNOWLEDGEMENTS

Several persons have been most helpful in the conduct and preparation of this report, without whose help the product may well not have emerged.

Thanks are offered Gene Durante, Comptroller at Rockland Community College, and William Schneck, Assistant Director of Finance at Rockland Community College, for their prompt, clear responses to all the requests for financial information. Additional thanks go to Carl Stein, Director of the Rockland Community College Association for the same cooperation.

George Rotelli, Treasurer of Rockland County, was most helpful in supplying needed information when called upon, and all of us at Rockland Community College are appreciative.

Assistant Professor of Mathematics at Rockland Community College, Robert Ludwig, was of invaluable help in data collection and interviewing. Without Bob's endeavors the investigation would have taken considerably longer.

Thanks must also go to Elissa Hanstein, my singular student aide for all the student interviews and the usual indefatiguable legwork she supplies. Additional thanks are offered Laura Barnett for her patience and labor in the typing effort.

Most of all, thanks to John Caffrey, for all the discussion time available to me upon request and his continued support as I saw the task through to completion.

CHAPTER I

INTRODUCTION

Purpose

The essential purpose of any college is to provide educational resources in the form of learning situations, resource personnel, and source materials to those who want to avail themselves of such resources. The ramifications of providing such resources are myriad and costly. During periods of prosperity, the equation of the educational product with dollars seemed less than dignified, especially when one considered that the recipients of educational products could, as a result, go on to earn dollars in the future.

At the present time prosperity is pinched, questions are posed as to how successfully individuals are being prepared for careers, and the age of accountability is upon us. The sources of revenue are demanding efficiency for the vast number of dollars being expended. Consequently, evaluation, or the assessment of impact of educational institutions, is common practice. It is not within the scope of this study to assess the educational impact of Rockland Community College on its students and community. The extent to which Rockland Community College succeeds with regards to the primary function of education is being addressed through other research endeavors. Rather, this study is an attempt to assess the economic impact of the college on the county of Rockland by the provision of jobs and the contribution to the county cash flow as is the case with any industry. Additionally by attracting new money into the county, in

the form of state and federal aid, the college makes a unique contribution to the local economy.

Most of the effects considered are current and short range. Specifically, no account is taken of such long-range effects as the upgrading of skilled and professional manpower, the contribution of scientific research to manufacturing and industry, or the drawing power of the college community as a desirable place for residence and/or the location of research and industrial enterprises. This drawing power can be estimated indirectly, especially in the analysis of capital development that can clearly be identified as resulting from the presence of a college or university. In addition, no account is taken of the long-range effects on the nonlocal economy or on the lifetime income and productivity of graduates.

Rockland Community College has not been held accountable to the local community on economic criteria. However, the college is sensitive to these criteria due to partial financial support by the local community. As a result, this study attempts to clarify significant aspects of the economic relationships between the college and the county and to present quantitative data relative to such relationships. As the reader becomes involved in the economic data, it should be remembered that the primary objective of the college is to meet higher educational needs in Rockland County. The College was not founded to bolster the local economy; such a condition exists as a by-product.

Background

To study the economic impact of an educational institution on a given area, one must be familiar with the area, define the economic factors

to be considered and describe the appropriate data needed, design suitable data collection techniques, appropriately analyze the data, create effective display, and conduct the research. Such an approach is time consuming and therefore expensive. Outside consultants might need to be solicited. Consequently, such a study might have been defered at Rockland were it not for the existence of a specific document.

In the fall of 1971, the American Council on Education (ACE) published the document Estimating the Impact of a College or University on the Local Economy, authored by John Caffrey and Herbert H. Isaacs. The document is advertised as a "How To Do It Manual", which presents a generic approach to enable any institution to conduct an economic impact study without the time demands described above. Since the model is generic and appropriate to a large university, it remains for the researcher to analyze the parameters of the specific institution and adapt the model accordingly. In this study any departures from the model are a result of such analysis and the data treated are reflective of the unique situation.

Rockland County

The county is the sole local sponsoring area of the college and for that reason was designated as the target area for assessing economic impact.

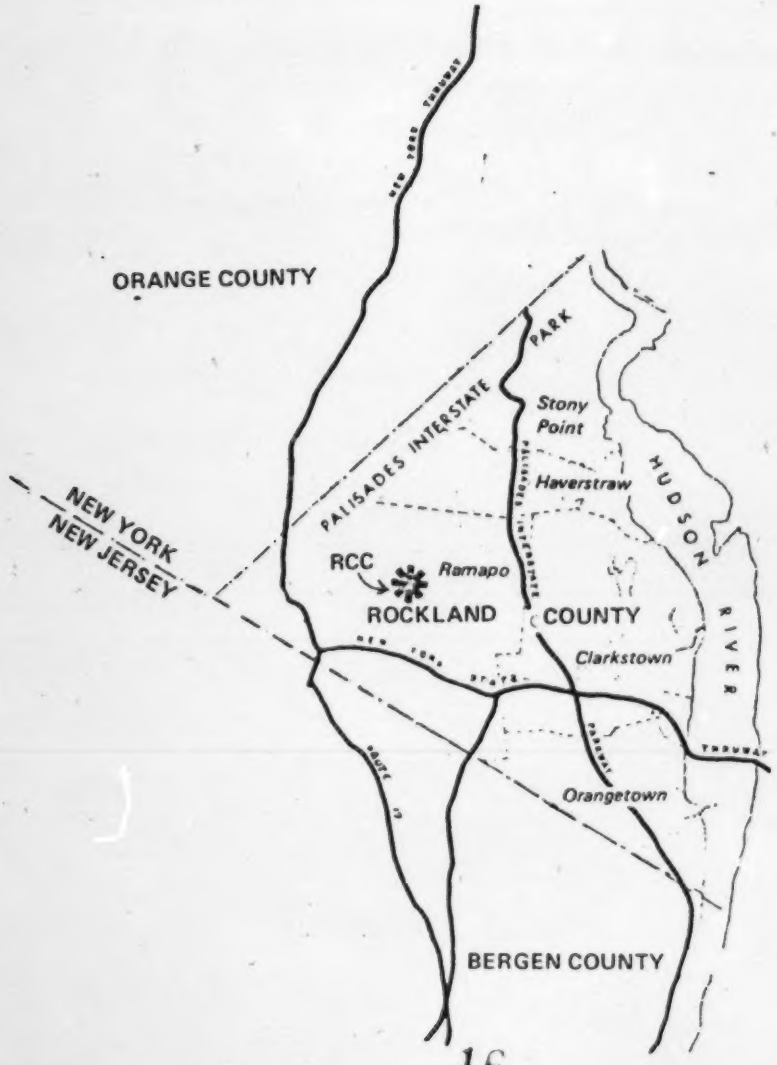
The county, comprising 176 square miles, is situated on the west bank of the Hudson River, 33 miles north of New York City's business district. In 1976-77, there were approximately 250,000 people residing in the county, making Rockland the 21st largest county in the state in terms of population. Rockland Community College is however, the sixth largest Community College

in the state of New York, in terms of enrollment.

Several hundred students from non-sponsoring districts outside Rockland, including foreign students, enroll at RCC. In this report, those students are classified as non-local, and their impact was calculated in a manner distinct from local students, since they pay additional tuition, they frequently rent housing and purchase food, and their money enters the local economy from outside.

Map of Rockland County

Figure 1



CHAPTER II

THE MODELS

To assess the impact of a college on a community, expenditures by the institution itself and by persons associated with it must be calculated. Four spending sources have been identified:

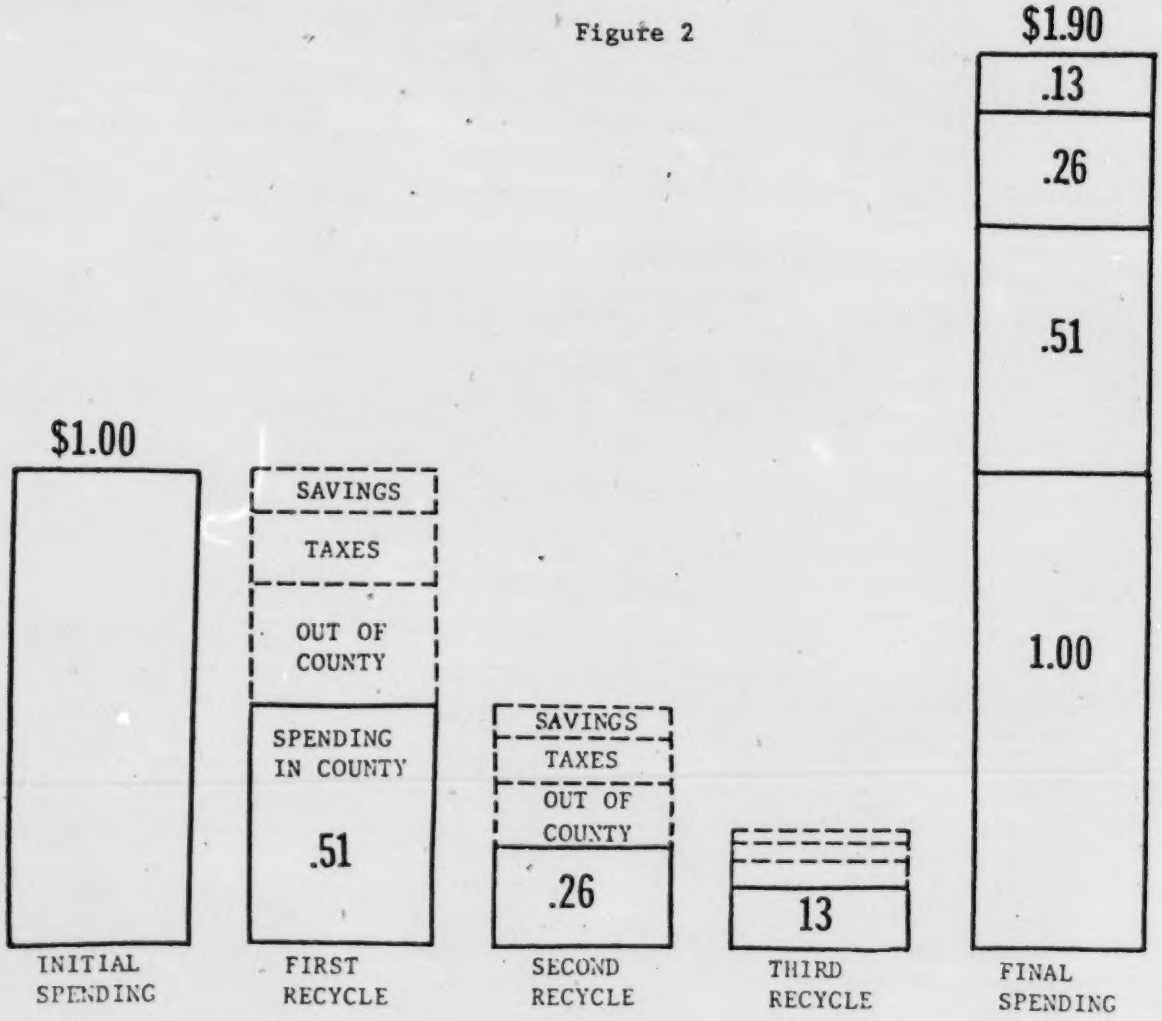
1. The college as a corporation
2. Faculty and staff as private individuals
3. Students as private individuals
4. Visitors as private individuals

The initial expenditures of these four groups does not comprise the total economic impact of the college. Approximately 35 cents of a dollar spent in local business establishments by community residents is returned to the spenders as income. The balance, approximately 65 cents, is spent by local business establishments for materials and supplies from other local enterprises (including local taxes) or for goods and services produced outside the community (including nonlocal taxes). But this is only the first round of transactions. The income accruing to local residents from this initial round is partially respent in the local business community. Some is saved; some is paid out in taxes and fees to federal, state, and local governments; and some is spent outside the community. Again, on the average, 35 cents of the dollar spent locally is returned in the form of income. This recycling process continues with diminishing increments at each stage. Eventually, income received by local residents from the initial dollar spent totals approximately 66 cents. The ratio of total income, 66 cents, to the initial income received, 35 cents, is almost two to one, 1.9:1.0.

The magnitude of any multiplier-income, employment, etc. - varies among localities at any point in time, as well as over a period of time for any one locality. It must be emphasized that the multiplier effects can only be statistically estimated, not traced directly. A multiplier of 1.9 is an average one among those computed for differing geographic regions; the range being 1.2 to 3.0. In addition these figures vary according to the self-sufficiency of the locale for replacement of goods and services. Figure 2 depicts reinvestment of moneys to arrive at a 1.9 multiplier, which has been used as the estimator in this investigation.

Reinvestment of Moneys

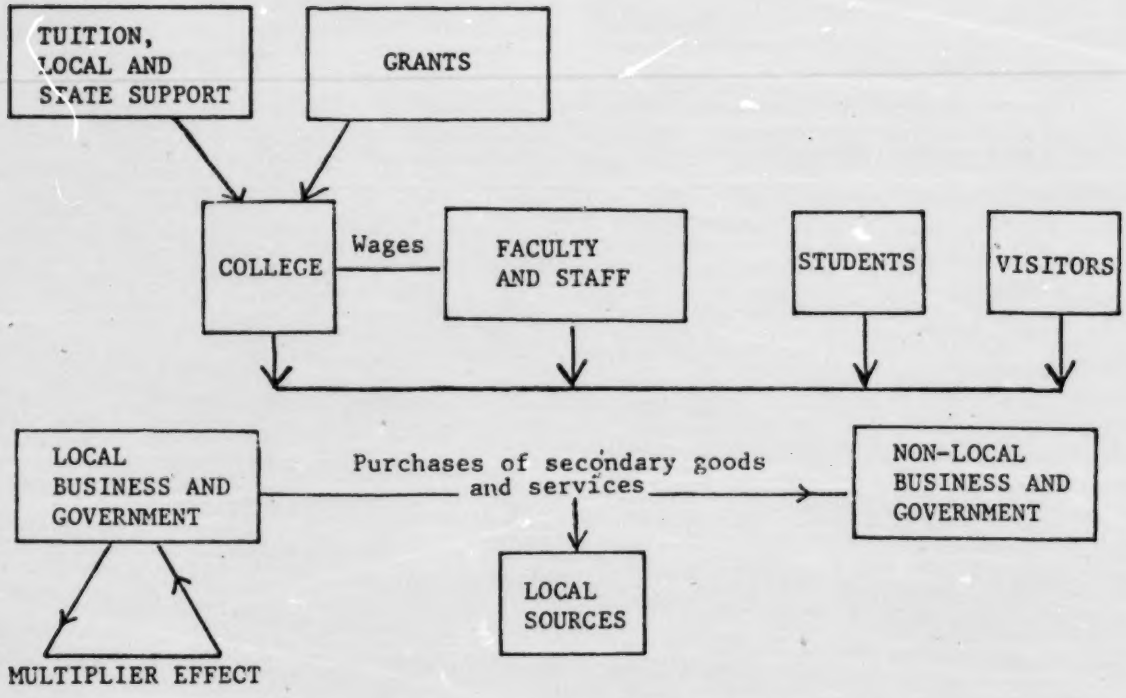
Figure 2



Taking into consideration the four spending sources and the multiplier effect, a model of expenditure can be seen in Figure 3.

Expenditure Model

Figure 3



It was mentioned earlier that the models proposed in the Caffrey-Isaacs document had to be adapted for an appropriate assessment. A list of the models that were used follows. Those models that were not incorporated in the study were either inappropriate or the issues were treated in a manner more efficient for Rockland Community College. All omission cases were

discussed with John Caffrey, who is now Executive Vice-President of Rockland Community College.

Models Used in Rockland Community College Study

MODEL B - 1.1

$(E_{L\,CR})$ College-Related Local Expenditures

$$(E_{L\,CR}) = (E_{L})C + (E_{L})F + (E_{L})S + (E_{L})V$$

$(E_{L\,C})$ = Local expenditures by the college (model B - 1. 1.1)

$(E_{L\,F})$ = Local expenditures by the faculty and staff (model B - 1.1.2)

$(E_{L\,S})$ = Local expenditures by the students (model B - 1.1.3)

$(E_{L\,V})$ = Local expenditures by the visitors (model B - 1.1.4)

MODEL B - 1.1.1

$(E_{L\,C})$

Local Expenditures by the College

$$(E_{L\,C}) = (e_{L\,C})(E_{C} - W_{F,S} - XF_{C} - R_{C} + FSA)$$

$(e_{L\,C})$ = Proportion of total college expenditures that are local, excluding compensation, internal items, and taxes

E_{C} = Total college expenditures

$W_{F,S}$ = Gross compensation to faculty, staff, and students

XF_{C} = Internal account transfers and payments

R_{C} = Taxes and other payments to governments

FSA = Total expenditures generated by faculty student association and student activity fees.

MODEL B - 1.1.2

(E_{LF})

Local Expenditures by Faculty and Staff

$$(E_{LF}) = (E_{HF}) + (E_{NHF}) + (E_{LNLF})$$

(E_{HF}) = Expenditures by local faculty and staff for local housing (model B - 1.1.2.1)

(E_{NHF}) = Local nonhousing expenditures by local faculty and staff (model B-1.1.2.2)

(E_{LNLF}) = Local expenditures by nonlocal faculty and staff (model B-1.1.2.3)

MODEL B - 1.1.2.1

(E_{HF})

Expenditures by Full-time Faculty and Staff for Local Rental Housing

$$(E_{HF}) = (f_r)(R_{LF})$$

f_r = Number of full-time faculty and staff renting locally

(R_{LF}) = Average yearly rent per faculty and staff renting local housing

MODEL B - 1.1.2.2

$(E_{NH\ F})$

Local Nonhousing Expenditures by Local Faculty and Staff

$$(E_{NH\ F}) = (f_L)\ (e_{LNH\ F})\ (NCI_F)$$

f_L = Proportion of faculty and staff residing locally

$(e_{LNH\ F})$ = Proportion of a consumer's total expenditures spent on nonhousing items in Rockland County

NCI_F = Net college income of faculty and staff

MODEL B - 1.1.2.3

$(E_{L\ NLF})$

Local expenditures by Nonlocal Faculty and Staff

$$(E_{L\ NLF}) = (1-f_L)\ (E_{1\ NLF})\ (NCI_F)$$

f_L = Proportion of faculty and staff residing locally

$(E_{1\ NLF})$ = Estimated proportion of nonhousing expenditures spent locally by each nonlocal faculty and staff person

NCI_F = Net college income of faculty and staff

MODEL B - 1.1.4

$(E_{L\ S})$

Local expenditures by Full-time Students

$$(E_{L\ S}) = (E_{M\ LS}) + (E_{H\ S}) + (E_{L\ NLS})$$

$(E_{M\ LS})$ = Local expenditures by full-time students residing in Rockland County (model B - 1.1.4.1)

$(E_{H\ S})$ = Expenditures by students for local rental housing (model B - 1.1.4.2)

$(E_{L\ NLS})$ = Local expenditures, exclusive of rent, by nonlocal students (model B - 1.1.4.3)

MODEL B - 1.1.4.1

$(E_{M\,LS})$

Local Expenditures, Exclusive of Room, by Full-time Students Residing in Rockland County

$$(E_{M\,LS}) = (S_L)\,(S_{1m\,S})$$

S_L = Number of full-time students living locally

$(E_{1m\,S})$ = Average 9 month expenditure in Rockland County, exclusive of room, per student of this type

MODEL B - 1.1.4.2

$(E_{H\,S})$

Expenditures by Students for Local Rental Housing

$$(E_{H\,S}) = (S_H)\,(E_{h\,S})$$

S_H = Number of students renting local housing

$(E_{H\,S})$ = Average 9 month rental expenditure per student

MODEL B - 1.1.4.3

$(E_{L\,NLS})$

Local Expenditures, Exclusive of Rent, by Nonlocal Students

$$(E_{L\,NLS}) = (S_{NL})\ (E_{1\,S})$$

S_{NL} = Number of nonlocal students

$(E_{1\,S})$ = Estimated 9 month average local expenditures by each nonlocal student

MODEL B - 1.1.5

$(E_{L\,V})$

Local Expenditures by Visitors to the College

$$(E_{L\,V}) = (V_1)\ (E_{1\,V}) + (V_2) + \ldots + (V_n)\ (E_{n\,V})$$

(V_n) = Estimated number of visits to the college by visitors in the $\underline{n}$th category

$(E_{n\,V})$ = Estimated local expenditures by each visitor in the $\underline{n}$th category during each visit to the college

CHAPTER III

METHOD

Instrument and Sampling

The questionnaire suggested by Caffrey and Isaacs to gather faculty-staff-student information was adapted to suit the needs of Rockland Community College. Two questionnaires (see Appendixes A & B) were developed, one for faculty and staff and one for students. The items reflect the condition of no campus residence at Rockland Community College.

A faculty member and a student were trained to use the respective questionnaires for data collection. Fifteen percent of the faculty and staff (54) and eight percent of the students (550) were randomly sampled using a permutised random numbers chart after assigning a number to each member of the group. Sampled faculty and staff members were reached by the trained faculty interviewer either in person or by phone and the total responses were elicited. Sampled students were reached by the student interviewer in the same two manners in addition to mail. There was a 42% return of the mailed questionnaires yielding a student response totaling 261. In all cases, the individual reached was informed that no data would be reported individually, but that the information would be presented statistically. This was done to assure no invasion of privacy.

Responses were verified with college business office records, available county data (1976 Rockland County Data Book), and state and

and federal estimates to determine reliability. In all cases, the response fit within the estimated range of the descriptive statistics. Due to the reliability check and the randomness of selection, the results were felt to be generalizable to the total population which included part-time faculty and students since this sector is becoming increasingly important to the college.

Additional Data Collection

Information to assess local expenditures by the college directly was gathered from the college business office. The data were categorized as follows:

1. expenditures to Rockland County vendors excluding compensation and taxes
2. gross compensation to faculty, staff, and students
3. payments made from other than College operating fund (Capital Construction Fund)
4. payments to government agencies
5. average bank balances and number of transactions for the student tuition account and the Rockland Community College Association account.

Further data concerned with college money from the county and the state contributions with regard to bank balances and money drawing interest were gathered from the office of the County Treasurer. Number of transactions involved with these bank accounts were ascertained from the college business office. A regional bank manager was then contacted for his determination of the increase in a bank's credit base due to the flow of money resulting from the presence of the college.

Information relating to the economic impact of visitors to the college was gathered from the following three sources:

1. Rockland Community College Cultural Affairs Office
2. Rockland Community College Fieldhouse Ticket Office
3. Rockland Community College Security Department

All the data gathered were then calculated according to the models described in Chapter II. Additionally, resulting figures were used to answer the following questions:

1. How would the economic impact to the county be affected if enrollment at Rockland Community College were to increase, remain the same, or decrease?
2. What would the effect on the economic impact to the county be if 100 Rockland Community College students were to go elsewhere?
3. How would such impact be affected if additional students attended Rockland Community College from other counties within New York State, from out-of-state, and from abroad?
4. If the college did not exist, and the land it occupied could be used to generate tax revenues, what would the difference be with regards to economic impact on Rockland County?

It should be remembered that the method employed to determine the economic impact of Rockland Community College on Rockland County evaluates the situation in a short time-span and does not assess the long range economic effects of the college.

CHAPTER IV

ANALYSIS OF RESULTS

Each of the models described in Chapter II is expanded in this chapter to include the total dollars for each variable that the data collection revealed. Brief explanations are incorporated and tables reflecting total impacts are included.

The reader does well to remember, as figures are compiled, that these numbers represent the best estimate available to the specific situation studied. Rather than consider a single dollar figure as "the economic impact", one should estimate a range on either side of the figure as the most probable impact fluctuation. A parameter of 10% more and less than the final estimate is recommended to arrive at the probable belt of economic impact.

It was mentioned earlier that the Caffrey-Isaacs manual included models inappropriate to this study. A brief explanation appears to be in order. One of the models yields the estimate of the value of local business property committed to college-related business. Since this condition is a major factor when one considers a large university situated in an urban area or a university town and quite limited when considering a suburban community college, it was decided to exclude this in the investigation. The condition is not however, non-existent and it should be remembered that some portion of local business value is a direct result of the existence of the college. The estimate arrived at does not include this.

A second factor which has been excluded is the amount of taxes collected locally that are non-real-estate paid by college related individuals. This would include non-real property taxes paid by individuals whose income, whether fully or partially, is generated by the college. Also included would be state aid to local public schools allocable to children of college-related families. It can be argued that if college related persons did not dwell in the involved premises, others would and revenues would still be collected. Consequently, such computation has been omitted. It can also be argued, however, that if there were no college in the county, it is possible that all the involved dwellings might not be either constructed or occupied. This possibility, should be recalled when considering the probable impact of the college.

Rockland County collects no sales tax revenues, which eliminates that factor from consideration.

Results as per Models

MODEL B - 1.1.1

$(E_L)_C$ Local expenditure by the College

$(E_L)_C = (e_L)_C \; (E_C - W_{F,S} - XF_C - R_C + FSA)$

$(e_L)_C$ = Proportion of total college expenditures that are local, including compensation, internal items, and taxes 38%

E_C = Total college expenditures $13,007,347

W_{FS} = Gross compensation to faculty, staff, and students $7,880,263

XF_C = Internal account transfers and payments (Capital Construction Fund) $25,750

R_C = Taxes and other payments to governments $1,995,383

FSA = Total local expenditures generated by faculty student association and student activity fees $1,669,914

$$= .38 \times (13{,}007{,}347 - 7{,}880{,}263 - 25{,}750 - 1{,}995{,}383) - 5{,}127{,}084 - 5{,}101{,}334 - 3{,}105{,}951)$$

$$(1{,}180{,}261) + (1{,}669{,}914)$$

$$= 2{,}850{,}175$$

MODEL B - 1.1.2

(E_{LF}) Local Expenditures by Faculty and Staff

$(E_{LF}) = (E_{HF}) + (E_{NH})_F + (E_L)_{NLF}$

(E_{HF}) = Expenditures by full-time faculty and staff for local housing

Expenditures by Civil Service for Local Rental Housing

E_H = (f h) (f 1) (C) (12)

f_h = Proportion of staff who rent = .15

f_1 = Number of staff who live in Rockland = 174

C = Average monthly rental $325

E_H = $101,790

Fulltime faculty expenditures for local rental housing number of local faculty who rent = 24

Average rental = 375 (12)

= 108,000

Part-time faculty expenditures for local rental housing

.15 (proportion who rent)

.79 (proportion who live locally)

DI_F = Part-time disposable income = .74 x gross = $762,265

e_H = Proportion of tenant's DI likely to be spent for rental housing = .25

$(E_H)_F$ = (.79) (.15) (762,265) (.25)

= 22,582

E_H = $101,790 + 108,000 + 22,582

= $232,372

Home maintenance = 1200 annually for goods and services

e_1 Proportion spent locally = .9

Number of full-time faculty and staff residing locally = 322

Housing expenditures = (1200) (322) (.9) = 347,760

Number of part-time faculty and staff = 142

Proportion of income from college = .17 x 1200 = 204

11 spent locally = .9 = 184

(184) (142) = 26,128 + 347,760 = 373,888

$(E_H)_F$ = 606,260

MODEL B - 1.1.2.2

$(E_{nh})_F$ = Local Non-housing Expenditures by Local Faculty and Staff

.79 Faculty and staff reside locally

.68 Proportion of expenditures likely to be made on non-housing items based on U.S. Bureau of Labor & Statistics - conservative for northeastern area

5,407,759 disposable income of faculty and staff

X.79 = 4,272,130 x .68 = 2,905,048 x .85 likely to be spent locally

$(E_{nh\ F})$ = 2,469,291

MODEL B - 1.1.2.3

$(E_{L\ NLF})$ Local Expenditure by Non Local Faculty and Staff

f_L Proportion of faculty and staff residing locally = .79

1 - .79 = Proportion of faculty and staff who are non-local = .21

39 = Number of non-local annual faculty and staff

$(E_{1\ F})$ = Estimated average local expenditures by non-local faculty and staff (as reported on the questionnaires) = $2200

$(E_{L\ NLF})$ = $85,800

This does not include local expenditures by non-local part-time faculty and staff which makes the estimate a conservative one.

According to the above assessments, local expenditures by faculty and staff

$(E_{L\ F})$ = $(E_{H\ LF})$ + $(E_{NH\ LF})$ + $(E_{L\ NLF})$

= (232,372 + 373,888 + (2,469,291) + (85,800)

= 3,161,351

Local Expenditures by students

Net salaries paid to students by the college: 475,778

Appropriation of this money is not included in the student models and no doubt increases the students' purchasing power. As a result of excluding this college-related income, student economic impact can also be considered conservative.

MODEL B - 1.1.3.1

(E_{MS}) Local Miscellaneous Expenses exclusive of room and board by students residing with parents

S_L = Number of full-time students = 3946

Average annual expenses for transportation, personal items, gifts, snacks, entertainment = $1200. This is a conservative estimate for the Rockland County region suggested in the Caffrey-Isaacs model.

e_1 = Proportion likely to be spent locally = .9

(E_{MS}) = (3946) (1200) (.9)

= 4,261,680

S_L Local Expenditures by Part-time students

Average annual expenses of part-time students related to attending Rockland Community College = $200. This is a conservative estimate to be found in the Caffrey-Isaacs document. It is estimated that all this money is spent locally.

MODEL B - 1.1.3.2

Expenditures by students for local rental housing

Number of students renting locally = 92

Conservative estimate of cost = $50/month or $600

(E_{HS}) = 55,200

MODEL B - 1.1.3.3

Nonhousing expenditures by students who rent local housing

Number of students = 158 which includes renters and foreign "live-ins"

Average non-housing expenditures per student = $2400

This estimate can be found in the source document

Proportion spent locally = .9

$(E_{NH\ S})$ = (158) (2400) (.9) = 379,200

MODEL B - 1.1.3.4

Local expenditures by Non Local Community Students

Full-Time:

Number of Students = 185

Estimated local expenditures = $366 based on 1/3 (local) of gas allowance used by financial aid office and $150 for food

= (185) (366) = 67,710

Part-Time:

Number of students = 178

Estimated local expenditure = 102 based on 1/3 (local) of gas allowance used by financial aid office for 6 credit student plus $60 for food

= (178) (102) = 18,156

Total = 67,710 + 18,156 = 85,866

Local expenditures by student government = 332,799

Total Student Expenditures

= 4,261,680 + 895,000 + 55,200 + 379,200 + 85,866 + 332,799

= 6,009,745

MODEL B - 1.1.4

Local Expenditures by Visitors

Number of visitors to cultural events, shows, and athletic events = 126,880

Vendors receipts = $37,663

Local Expenditure per visitor = $7 (gas, food, motel = $888,160)

Performers local expenditures

(a) for meals ($5 estimate) = $2550

(b) motels = $ 250

(c) income to Rockland County members of Hudson Valley Philharmonic

= $6300 x .8 (spent locally) = 5040

Total = $7,840

Dollars paid by outsiders at events

(a) students (security) = $17,000

(b) security (MACOL) = 12,000

Total 29,000

Number of Credit-free students and official visitors = 5300

Estimate of each one's annual local expenditure = $ 10

Total = $53,000

Local expenditures by Visitors

= $37,663 + 888,160 + 7,840 + 29,000 + 53,000

= $1,015,663

Additional Revenue to be Expended

Grant money received by the College = $1,327,742

Since grant money is expressly designed for specific college services or the employ of local people (CETA, financial aid) it can be conservatively assumed that .8 of the money is expended locally.

Local Expenditures from Grant Money = $1,062,194

The total economic impact on Rockland County as a result of the above assessments can be found in Table 1.

TABLE 1
ECONOMIC IMPACTS ON LOCAL BUSINESS

Local Expenditures	Assessed Impact
By the College	$ 2,850,175
Housing by faculty and staff	606,260
Non-housing by local faculty and staff	2,469,291
By non-local faculty and staff	85,800
By full-time students	4,261,680
By part-time students	895,000
By student for local rental housing	55,200
Non-housing for students who rent	379,200
By non-local commuting students	85,866
By student government	332,799
By visitors	1,015,663
From Grant Revenues	1,062,194
Sub-total	14,099,128
Times 1.9 multiplier = Grand Total	$ 26,788,343

In addition to local expenditures and their multilied effects, there are other economic conditions in the county that are a result of the college's existence and they should be mentioned at this time.

Money used by the college is not expended upon receipt. Revenues are deposited and held in local banks thereby generating interest to the depositor and enhancing the credit base of the bank involved.

Most of the interest generated is received by the county. The county receives money in the form of tax dollars and deposits that portion of its receipts related to the College in two funds; the College Fund and the General Fund. Additionally, the county receives money for the college from the State of New York quarterly. These funds too are deposited in local banks and draw interest. Some of the money is deposited in regular interest accounts and draws 5% interest, while the remainder is deposited as Certificates of Deposit and draws 7½% interest. Estimates of interest accrued by the county in this manner can be found in Table 2 . Information used to generate these assessments was gathered from the office of the County Treasurer.

TABLE 2
INTEREST ACCRUED BY ROCKLAND COUNTY

Source	Amount
General Fund (College Share)	$ 29,312
Certificate of Deposit	6,774
College Account	34,311
State Aid	25,450
Total	$ 95,847

In addition to county and state revenues, the college uses student tuition and Rockland Community College Association money to support its operation. Average monthly deposits resulting from the four revenue sources along with the number of transactions were estimated from County Treasurer and College Finance Office data. A regional bank manager was then consulted to determine the impact of this cash flow on the credit base of the local banks. Four banks are used for transactions; one for payroll, one for the College and General Funds, one for the Tuition Account, and one for the Association. Given an

annual operating budget of $13,142,500, (see Appendix C) with the calculations described above, the banking consultant estimated a collective expansion of credit base at $35,000 per year. This estimate can be considered very conservative since it does not include revenue gathered from checking account and savings account deposits made by college-related personnel.

Management people at a few local places of business were reached either in person or by phone to determine their perception of the impact of the college on their income. Included in the sample were two restaurants, two delicatessens, four motels, two gas stations, and an ice-cream store. The consensus was that daily business was helped, though not substantially, by the college. However, there was a large increase in the volume of activity during any of the college's events. All the people contacted felt it was prudent to stay on good terms with the college since it was "good for business".

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

Conclusions

The study has assessed the economic impact of Rockland Community College on local business. Factors which would benefit the college's position have been eliminated and rationale for such decisions has been provided. Realistic conservative estimates have been used and the use of the multiplier employed in the analysis has been explained. Interpretation of the results in the form of a probable range of 10% in either direction has been discussed. With a net impact of 26,788,343, the range of impact would then be 24,109,509 to 29,467,177.

The bottom line resulting from the analysis is that for Rockland County's contribution of $2,637,033, to Rockland Community College, the economic return to county business ranges from approximately 24 million dollars to 29½ million dollars.

Implications

Rule of thumb Estimate. A rule of thumb estimate of the economic impact of a college on its local environs, based on the results of several other studies reported to John Caffrey, is approximately twice the college budget. A large university will generate more business that is directly college-related such as bookstores and support services for students who live on campus. Twice the budget as a quick estimate has been determined as appropriate to the university condition. For the local Community College however, based on this study and others also reported to John Caffrey, the best estimate is still twice the college budget. This rule of thumb, further verified by this investigation, is convenient for a quick and easy estimated range. However, in view of the difficulty in obtaining money currently, it

might be politically prudent for a college to do an in-depth analysis.

Enrollment Change. One of the questions posed in Chapter III was, "How would the economic impact on the county be affected if enrollment at Rockland Community College were to increase, remain the same, or decrease?"

TABLE 3
ENROLLMENT DECLINE OF 500*

Item	Impact
Savings:	
To College Budget at 1700 each	$ 850,000
County Share 26-2/3%	226,100
Economic Impact Without Multiplier	
Student Expenditures	
Exclusive of rent @ 803	401,500
Rental @ 600 - Assume 5% would rent	15,000
Lost student tuition @ 644	322,000
Lost state aid @ 800	400,000
Lost financial aid (1/3 student body - average 470)	77,550
Assoc. Expenditures (6% of total related local expenditures)	96,103
	1,312,153
Less savings	226,100
Economic Impact Loss	1,086,053
Net Economic Impact	$25,702,290

*Based on enrollment of 7994 for 1976 - 77

Students Going Elsewhere. If those 500 students disperse in the following manner:

a) 155 to Orange Community College

b) 155 to Dutchess Community College

c) 155 to Westchester Community College

d) 35 nowhere

What additional effect does it have on the economic impact of Rockland Community College? Economic ramifications can be seen in Table IV.

TABLE 4
ECONOMIC IMPACT OF CHARGEBACKS

Item	Impact
OCC (155 x 800)	$ 124,000
DCC (155 x 840)	130,200
WCC (155 x 710)	110,050
	364,250
Less savings of 35 students (450)	15,750
Total economic loss	$ 348,500

If 500 students were to enroll at Rockland Community College, the economic impact on the county can be seen in Table 5.

TABLE 5
ENROLLMENT INCREASE OF 500

Item		Impact
Cost:		
To College Budget @ 1700 each	$	850,000
County share 26-2/3%		226,100
Economic Impact Without Multiplier		
Student Expenditures		
Exclusive of rent @ 803		401,500
Rental @ 600 - Assume 50% would rent		300,000
Increased tuition - 50% local @ 644		161,000
20% non-local N.Y. @ 944		94,400
20% out-of-state and 10% foreign @ 1288		193,200
Increased state-aid @ 800		400,000
Increased financial aid (1/3 of 500 x .470)		77,550
Association expenditures (6% related increase)		96,103
Total		1,723,753
Less Cost		266,100
Net Economic Impact Gain		1,457,653
Existing Economic Impact		26,788,343
Total Economic Impact	$	28,245,996

No-College Existence. The College is situated on 176 acres of land in the Town of Ramapo, village of Suffern. The original buildings, the almshouse, the working barn, and the jailhouse occupy 17 of those acres. If the college did not exist and the land were used for residential development, property taxes

could be collected from which the college is exempt. The original usage of 17 acres would remain, leaving 159 acres available for development. The median home value for the Town of Ramapo is $40,328 which generates approximately $3,000 per year in taxes. Assuming 10% of the land were used for streets and increased acreage, 143 acres would be available for development. If all the 143 acres were developed, at one acre per dwelling, 143 homes could then generate taxes.

If there were no college, based on state figures, about 25% of the students would remain in the county. Therefore, 75% of student expenditures would be lost. Additionally, the county would then be responsible for the chargebacks.

Full faculty and staff expenditures would be lost since those who would remain in the county would be occupying positions that others have and therefore not be "additional impactors". The college generates additional positions. Obviously, direct college economic activity would be eliminated as well as all the impact generated by visitors.

Additionally, a portion of family income would leave the county when children had to go elsewehere to school. A conservative estimate of annual cost of attending school away from home is $3,500.00. This figure can be reduced to $2,000 based on a) financial aid receivable and b) certain items already included in student expenditures. Therefore $2,000 of the economic impact of the families of 75% of the full-time students would be lost as well.

Table 6 indicates the change of economic impact generated in the county of Rockland, if Rockland Community College did not exist.

TABLE 6
ECONOMIC IMPACT CHANGE WITH NO-COLLEGE

Item	Impact
Expenditure by College	$ 2,850,175
Expenditure by Faculty and Staff	3,161,351
Expenditure by Students	4,507,309
Expenditure by Visitors	1,015,663
Grant Revenue Loss	1,062,194
Family Income Loss (.75 of 4,000 x 2,000)	6,000,000
Loss to county	18,596,692
x 1.9 multiplier	35,333,715
Reduction in taxes due to "no-college"	2,637,033
Increased revenue from residential land use	429,000
	3,066,033
Less chargebacks 4,000 x 780 (average neighboring)	3,120,000
Net gain	(53,967)
x 1.9 multiplier	(102,537)
Total loss of economic impact	$ 35,436,252

It appears then that if Rockland Community College did not exist, local business in the county of Rockland would miss an economic impact ranging from $31,892,627 to $38,979,877. That impact, resulting from an industry that does not pollute the environs is attractive as a sole contribution. However, the college enhances the intellectual, social, and career development of its constituency as a primary function and stimulates the local economy as a by-product. It was mentioned in the introduction that the college is sensitive to the current economic pinch and consequently conducted this investigation. The results supply rationale for continued, needed support.

Summary of Results

1. For an investment in Rockland Community College of $2,637,330, the county of Rockland receives in return county business activity ranging from 24 million to 29½ million dollars. Due to the college, state money, federal money, and student tuition are added to the county's economic activity. Money, multiplied by the reinvestment principle, enters the county in the form of direct college expenditures and through purchases of individuals associated with the college. County recipients are local businesses, agencies, and real estate owners.

2. As a result of this investigation, it can be concluded that the county of Rockland, due to its contribution to RCC, receives in return 10 times its contribution in the form of economic impact. An alternative measure is that twice the college budget ($13,053,705) is returned to the county to impact economically.

3. Local economic impact is affected by student enrollment in the following ways.

   A. A rise in enrollment increases the economic impact and a decline decreases such impact. (See Tables 3 & 5)

   B. It costs Rockland County more money to have a resident student enroll elsewhere than it costs if the student enrolls at RCC. This is a result of the "chargeback" costs that are built-in to the financial structure of the State University of New York. This structure is such that the cost of a student's education is shared by the county of origin. When a Rockland County student attends college elsewhere, that new county contributes X number of dollars per student to its college. Rockland County is "charged-back" the new county's contribution per student. Rockland's contribution per student to RCC is $150 less than the average contribution in the state. Consequently, there is a high probability that Rockland County will have to contribute more dollars should residents attend schools elsewhere. (See Table 4). In other words, if there were no Community College at Rockland, about 75% of the students would attend school elsewhere and the County of Rockland would be charged $483,000 more than it currently contributes.

   C. Students attending Rockland Community College from out of county, out of state, and out of country increase the economic impact to a greater degree (See Table 5) than do Rockland resident students. The additional impact is generated on the basis of increased expenditures in the form of room, board, leisure, and increased tuition.

SOURCES

Caffrey, J. and Isaacs, H., Estimating the Impact of a College or University on the Local Economy. American Council on Education, Washington, D.C. 1971

Peat, Marwick, Mitchell, & Co., Certified Public Accountants, A Profile of the Economic Impact of Virginia State College on the Communities of Petersberg, Colonial Heights, and Ettrick, Philadelphia, Pa., 1973

Romano, R. and Herbert, N., The Economic Impacts of the College on the Local Economy. Broome Community College, 1977

SDL Systems Research Group, The Economic Impact of Colleges and Universities on the Boston Area., Boston, Mass., 1974

Selgas, J. and Saussy, J., The Impact of the College on the Local Economy., Harrisburg Area C.C., Harrisburg, Pa., 1973

Strung, Wm., The University and the Local Economy. Bureau of Business Research and Service, University of Wisconsin, Madison, Wis., 1971

Wachtel, N. and Morehouse, J., College Impact Studies Hampden County and Amherst, Mass., Lower Pioneer Valley Regional Planning Commission, 1971

APPENDIX A

Faculty and Staff Questionnaire

1. What is your college status?

   _____Faculty

   _____Staff

2. Where is your residence?

   _____Rockland County

   _____Elsewhere

3. Do you

   _____rent

   _____own home?

4. What are your average monthly expenditures in

   _____housing

   _____food

   _____all other?

5. What is your annual total gross income for the household?

   _____

   _____Net pay

6. What is your approximate monthly expenditure (or percentage) in Rockland County?

   _____

7. What is your average monthly balance in

   _____local bank checking accounts?

   _____local bank savings accounts?

APPENDIX B

Student Questionnaire

1. Where is your residence?

   _____Rockland County

   _____elsewhere

2. What is your marital status?

   _____single, divorced, widowed

   _____married

3. If single, etc. do you

   _____rent housing?

   _____reside with parents?

4. If married, do you

   _____rent?

   _____own home?

5. Do you pay for board? If yes, monthly amount_____

6. What are your average monthly expenditures?_____

7. What is your approximate monthly expenditure in Rockland County?

   _____

   _____(or percentage of 6)?

8. What is your average monthly balance in

   _____Rockland County Bank checking account?

   _____Rockland County Bank savings account?

APPENDIX C

COLLEGE REVENUES

Income:

Student Revenues	4,703,527	
State Aid	5,027,848	
Offset to Expenses	525,000	
Revenues in Lieu of Local Sponsor	160,000	
County Contribution	2,637,330	
		$13,053,705

Expenditures:

Gross salaries	7,880,263	
Employee Benefits	1,656,682	
Payments to Rockland County	338,701	
Operating Expenses	3,178,059	
		$13,053,705

Additional grant money received from state and federal sources and expended as designated for financial aid and programs

$ 1,062,194

UNIVERSITY OF CALIF.
LOS ANGELES

FEB 2 1979

CLEARINGHOUSE FOR
JUNIOR COLLEGES